

**Remarks/Arguments**

**New Claims**

New Claims 51 and 52 substantially parallel Claims 15 and 30 and add a limitation regarding the occlusion of all direct emanation from the illumination source. This limitation is fully supported in the specification, for example, in Figures 5 through Figure 7a.

**Rejection of Claims 2-12, 14-24, 26-34, 36-43, and 46-50 under 35 U.S.C. §103(a)**

The Examiner rejected Claims 2-12, 14-24, 26-34, 36-43, and 46-50 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,295,052 (Chin) in view of U.S. Patent No. 5,076,660 (Messinger). Applicants respectfully traverse the rejection.

**Claim 4**

**Chin does not teach an illumination source protected from direct physical intrusion from all directions**

Claim 4 has been amended to recite: “said heat sink assembly and said lens are arranged to protect, from all directions, said illumination source from direct physical intrusion from outside said microscope.” As shown in Figure 7a, there is no direct or linear path from outside of the microscope through the lens and heat sink assembly, which includes the baffle, to the light source. For example, an object thrust against the baffle plate orthogonal to the plate cannot penetrate past baffles 57. An object inserted through openings 58 at an angle is blocked by baffles 57 or diverted by the baffles away from the illumination source.

In contrast, significant portions of the illumination source in Chin are exposed to direct contact. For example, as shown in Fig. 1 of Chin, there is a direct, linear path between the sinks, i.e. sink 38, to light source 34. In fact, the leader line for reference designator 34 in Fig. 1 points directly to such an area. In the Response to Arguments, the Examiner cited Fig. 2 of Chin as protecting the light source. Although Applicants maintain that the limitation of: “said heat sink assembly and said lens are arranged to protect said illumination source from direct physical intrusion” is not read upon by the partial protection offered by Chin (Chin only protects the light source from intrusion from a limited number of directions), Applicants have amended Claim 4 to

add the limitations noted above. Since Fig. 1 of Chin shows that the light source is not protected from intrusion from the directions shown in Fig.1, Chin does not protect the light source from intrusion from all directions.

Chin does not teach, suggest, or motivate the above limitation of Claim 4.

Chin teaches against protecting the light source from direct physical intrusion from all directions

Chin's arrangement requires that the light source always be open to direct physical intrusion. For example, even if heat sinks 36 and 38 are pushed together axially (for example, sink 36 is moved right in Figure 1 until it contacts sink 38), there remains direct access to the light source between the fins of the heat sinks. Further, if the light source were surrounded by solid walls as shown in Fig. 2, air flow to the heat sinks would not be possible, rendering the heat sinks virtually useless. "A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997)."

Modifying Chin to protect the light source from all directions would change the principle of operation of Chin

The fundamental principal of operation for Chin is the movement of air about the light source. If the light source were fully encased (protected from direct intrusion), this principal of operation would be altered. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." As quoted in MPEP 2143.01.

Modifying Chin to protect the light source from all directions would render Chin unsatisfactory

The cooling function in Chin is dependent on the flow of air around the light source, between the heat sinks, and around the heat sink fins. Modifying Chin so that the heat sinks fully encase the light source (protect from direct physical intrusion) would drastically alter the required configuration of components and subsequent air movement. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then

there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).” As quoted in MPEP 2143.01.

Messinger is not analogous to the present invention

Messinger is teaching a light source for fiberoptic illumination. Fiberoptic illumination is not analogous to the microscope recited in Claim 4.

Messinger’s baffles do not occlude the emanation of light from the inlet

Claim 4 recites: “...said baffle is operatively arranged to deflect air entering said microscope via said inlet and to occlude the emanation of light from said illumination source through said air inlet...”

Applicant presented arguments regarding the above limitation in the reply mailed March 7, 2006, and for the sake of brevity, these arguments are reaffirmed, but not repeated. In the Response to Arguments, the Examiner stated that Applicants’ arguments were based on the hypothetical changing of the orientation of Messinger. This is incorrect. Applicants did not state that it was necessary to change the orientation of Messinger, rather, Applicants stated that a hypothetical movement of inlet 9 more clearly showed that significant amounts of light pass through the partitions and baffles of Messinger to enter the passageway to inlet 9 (beginning on the right hand side of the partitions in Figure 1). That is, assuming *arguendo* that light is occluded from inlet 9, that occlusion would be a result of the configuration of the passage between the partitions and the inlet and the changes in direction for a light beam dictated by this configuration. For example, light streaming past the partitions and baffles must make three 90 degree turns in the passageway in order to exit through inlet 9. **It is not necessary to move inlet 9 for Messinger to fail to teach, suggest or motivate the partitions occluding light from the inlet.**

Messinger’s partitions and baffles are not proximate the air inlet

Applicant presented arguments regarding the above limitation in the reply mailed March 7, 2006, and for the sake of brevity, these arguments are reaffirmed, but not repeated.

Messinger teaches against locating partitions and baffles proximate the air inlet

Applicant presented arguments regarding the above limitation in the reply mailed March 7, 2006, and for the sake of brevity, these arguments are reaffirmed, but not repeated.

Modifying Messinger would change the principle of operation of Messinger

Applicant presented arguments regarding the above limitation in the reply mailed March 7, 2006, and for the sake of brevity, these arguments are reaffirmed, but not repeated.

Modifying Messinger would render Messinger unsatisfactory

Applicant presented arguments regarding the above limitation in the reply mailed March 7, 2006, and for the sake of brevity, these arguments are reaffirmed, but not repeated.

For all the reasons noted above, Claim 4 is patentable over Chin and Messinger. Claims 2, 3, 5-12, and 14, dependent from Claim 4 enjoy the same distinction with respect to Chin and Messinger.

**Claim 15**

Claim 15 recites: “a fixed baffle assembly located proximate said air inlet and operatively arranged to divert air entering said microscope via said inlet and to occlude the emanation of light from said microscope through said air inlet.”

Claim 4 recites a baffle and the limitations noted above. In the arguments regarding Claim 4, Applicants have shown that: Messinger is not analogous to the present invention; Messinger’s baffles do not occlude the emanation of light from the inlet; Messinger’s partitions and baffles are not proximate the air inlet; Messinger teaches against locating partitions and baffles proximate the air inlet; modifying Messinger would change the principle of operation of Messinger; and modifying Messinger would render Messinger unsatisfactory. Therefore, Claim 15 is patentable over Chin in view of Messinger. Claims 16-24 and 26-29, dependent from Claim 15, enjoy the same distinction from the cited references.

**Claim 30**

Claim 30 recites: “a fixed baffle located proximate an air inlet of said microscope and operatively arranged to deflect air that enters said microscope via said inlet, wherein said

microscope further comprises an illumination source and said baffle occludes the emanation of light from said illumination source through said inlet.”

The arguments regarding Claim 15 are applicable to Claim 30. Therefore, Claim 30 is patentable over Chin in view of Messinger. Claims 31-34, 36-43, and 46-50, dependent from Claim 30, enjoy the same distinction from the cited references.

Applicants courteously request that the rejection be removed.

Rejection of Claims 13, 25, 44, and 45 under 35 U.S.C. §103(a)

The Examiner rejected Claims 13, 25, 44, and 45 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,295,052 (Chin) in view of U.S. Patent No. 5,076,660 (Messinger) as applied to Claims 5, 17, and 36, and further in view of U.S. Patent No. 6,698,200 (Rauen). Applicants respectfully traverse the rejection.

Applicants have shown that Claims 4, 15, and 30 are patentable over Chin in view of Messinger. Rauen teaches a thermodynamic engine and fails to cure the defects of Chin and Messinger with respect to Claims 4, 15, and 30. Therefore, Claim 13, Claim 25, and Claims 44 and 45, dependent from Claims 4, 15, and 30, respectively, enjoy the same distinction with respect to the cited references.

Applicants courteously request that the rejection be removed.

New Claims 51 and 52

New Claims 51 and 52 substantially parallel Claims 15 and 30 and add a limitation regarding the occlusion of all direct emanation from the illumination source through the air inlet. Therefore, the above arguments for Claims 15 and 30 regarding Chin in view of Messinger, are applicable to Claims 51 and 52, respectively.

Further, the Examiner cited Messinger regarding the baffle assembly recited in Claims 15 and 30. In particular, the Examiner cited elements 19 and the partitions shown in Fig. 1 of Messinger. Assuming *arguendo* that Messinger is analogous to the microscope recited in Claims 51 and 52, neither elements 19 nor the partitions occlude all direct emanation of light from the

illumination source through inlets 11 and 11a or inlet 9. With reference to Fig. 1 in Messinger, it is clear that there is no direct emanation from lamp 1 toward the partitions. There is no sign or teaching of a lens on lamp 1 that would direct light anywhere but directly at light bundle 3. However, if direct emanation from lamp 1 were to travel to the right in Fig. 1, there are two gaps between the partitions through which such direct emanations would pass. Thus, the partitions cannot block all direct emanations of light from lamp 1.

In like manner, assuming that all direct emanations from lamp 1 were not focused on light bundle 3, elements 19 are not positioned directly between lamp 1 and inlets 11 and 11a. Therefore, elements 19 cannot occlude any direct emanation from lamp 1 to inlets 11 and 11a.

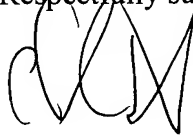
Chin does not teach a baffle and therefore, cannot cure the defects of Messinger.

Therefore, Chin and Messinger do not teach, suggest, or motivate all the limitations of new Claims 51 and 52 and new Claims 51 and 52 are patentable over Chin and Messinger.

### Conclusion

Applicant respectfully submits that all pending claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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